



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,860	04/09/2004	Alain Lagnier	033818-104	8692
21839	7590	07/19/2006	EXAMINER	
BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			MAKI, STEVEN D	
			ART UNIT	PAPER NUMBER

1733

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

**Office Action Summary**

Application No.

10/820,860

Applicant(s)

LAGNIER, ALAIN

Examiner

Steven D. Maki

Art Unit

1733

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1733

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 115 (JP 8-175115) in view of Shinohara (US 6116310).**

Japan 115, directed to a tire for use on ice (paragraphs 2, 13 of machine translation), discloses a tire having a tread comprising blocks and sipes in the blocks. The sipes have a width of 0.5-1.5 mm (500-1500 micrometers). Each sipe is made using a blade 15 wherein each wall surface of the blade has a roughness 16 of 20-300 micrometers. The tire has reduced uneven wear. Japan 115 suggests the claimed average roughness (micro-level roughness) of 1-10% sipe thickness (1/100 to 1/10) since Japan 115 suggests a "micro-level" roughness of 4-20% the sipe thickness (a roughness of 20 to 300 micrometers and a sipe width of 500-1500 micrometers). Although Japan 115 suggests a "macro-level" configuration in the form of a zigzag (figure 8, paragraph 10 of machine translation), Japan 115 does not recite the sipe as having "lines of motifs in relief" and the corresponding mold blade of "lines of motifs forming hollows".

As to claims 1-10, it would have been obvious to one of ordinary skill in the art to provide Japan 115's mold blade for the sipe with a macro-level roughness with "lines of motifs forming hollows" so that the sipe formed using the blade has "lines of motifs in relief" and such that the "macro-level" roughness is at least 10% sipe thickness (the

Art Unit: 1733

maximum depth is at least equal to  $1/10$  of sipe thickness  $e$ ) in view of the suggestion from Shinohara wherein Shinohara, directed to a tire tread with sipes, suggests forming grooves in the walls of the sipe such that the grooves have a depth  $t_2$  of **10-80% the sipe thickness  $t_1$**  so that water can be discharged.

Applicant argues that it is not seen that there is any motivation from those documents for combining two types of roughness on the walls of an incision. This argument is not persuasive. Japan 115 and Shinohara both disclose sipes in blocks of a tire tread for use on ice. Japan 115 and Shinohara both teach that the walls of the sipe contact each other. Japan 115 and Shinohara both teach prevention of lowering of the rigidity of the block. See paragraphs 3 and 5 of machine translation of Japan 115 and col. 2 lines 15-27 of Shinohara. Japan 115 suggests providing "microroughness" (e.g. formed by chemical etching of the blade used during molding to form the sipe, paragraph 9) on the sipe walls so that the frictional resistance of the contact of the sipe walls is increased to control rigidity to thereby reduce wear. Japan 115 also suggests using a "macro configuration" (zigzag) for the sipe. See paragraph 10 of machine translation. Shinohara suggests using "macroroughness" (sipes walls with "grooves" and "ribs", figures, col. 7 lines 16-28) so that water can be removed when the sipe walls are in contact. One of ordinary skill in the art would have been motivated to use the "microroughness" and "macroroughness" to obtain the benefits of controlling rigidity to improve wear (Japan 115) and drainage of water (Shinohara). One of ordinary skill in the art would readily expect Japan 115's microroughness to be useful and applicable to Shinohara since the walls of Shinohara contact (e.g. figure 6, block in contact with ice)

Art Unit: 1733

and Japan 115 teaches that the "microroughness" generates big frictional resistance of the contacting sipe walls (paragraph 5) to control rigidity (prevention of lowering of rigidity being desired by Shinohara).

As to claims 2-3 and 9, see the "intersecting" in figure 18 of Shinohara.

As to claims 4, 5 and 10, the walls of the sipe of each of the applied references cooperate mechanically. As to claim 5, note the suggestion from Shinohara (figure 10) to use curved / rounded surfaces for the sipe wall.

As to claim 6, note suggestion from Shinohara (figure 5) to incline the grooves on the sipe wall with respect to the radial direction.

As to claim 7, see pitch of the grooves suggested by Shinohara (figure 3).

3) **Claims 2-3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 115 in view of Shinohara and further in view of Japan 108 (JP 2-310108).**

As to claims 2-3 and 9, it would have been obvious to use "intersecting" lines of grooves on the sipe wall in view of (1) the suggestion from Shinohara to form grooves in the sipe wall to drain water and (2) Japan 108's suggestion to form grooves for draining water in walls of a sipe such that they "intersect" (figure 7).

#### Remarks

4) The English translation of applicant's priority document has been received. Japan 2002-192916 (published 7-10-02) is no longer available as prior art and has therefore been removed as a reference.

Applicant's arguments filed 5-5-06, addressed above, have been fully considered but they are not persuasive.

- 5) No claim is allowed.
- 6) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

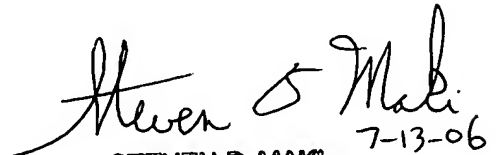
- 7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
July 13, 2006

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
7-13-06